



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/806,729

03/23/2004

Zachary Steven Smith

200308820-1

2539

22879

7590

06/20/2006

HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

PORTKA, GARY J

ART UNIT

PAPER NUMBER

2188

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/806,729

Applicant(s)

SMITH ET AL.

Examiner

Gary J. Portka

Art Unit

2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6,10,11,15 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 3-5,7-9,12-14 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. Claims 1-19 are presented for examination.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 17-19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 17 and 19 recite a computer-readable medium, which as described in the specification at page 6 might be a transmission media such as electromagnetic radiation, and thus according to current practice, non-statutory matter. Claim 18 recites means for receiving, detecting, and producing, which as described in the specification, might be entirely embodied within a transmission media, and thus non-statutory matter.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-2, 6, 10-11, 15, and 18-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Sano et al., US 6,941,406 B2.

6. As to claims 1 and 18, Sano discloses the *system and method* as recited, including *virtual bus interface* (at 32) *that produces a bus-type transaction from a point-to-point type transaction* (see Fig. 1, col. 1 lines 50-56, and col. 2 lines 16-54), *detection logic connectable thereto to detect cache coherency protocol mode associated with an originating system that provides the point-to-point transaction* (within 32, see col. 4 lines 33-54 and 61-67, where other nodes send various coherency commands, the commands of various types indicating coherency protocol modes to the extent recited), and *coding logic connectable to the above, to control how a cache coherence transaction from the origination system is processed by the interface, based on the mode detected* (within 32, see col. 27 lines 15-18, 27-33, and 54-57, col. 28 lines 23-27 and 51-53, and col. 29 lines 4-11 and 26-29, describing transactions initiated on the bus in response to the various commands).

7. As to claim 10, Sano discloses the system substantially as described above with regard to claim 1; point-to-point and bus-type transaction logic as recited are indigenous to the functions as described above.

8. As to claims 2 and 11, Sano discloses state machine to track transaction types to the extent claimed (since the various command types are responded to).

9. As to claims 6 and 15, Sano discloses initially assume directory-based mode (since a directory at 34 is used).

10. As to claim 19, Sano discloses the interfaces substantially as described above with regard to claim 1; that is, each function performed as described with regard thereto requires the interfaces as recited.

Art Unit: 2188

11. Claims 1-2, 10-11, and 18-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Quach et al., US 6,711,653 B1.

12. As to claims 1 and 18, Quach discloses the *system and method* as recited, including *virtual bus interface* (at 140 and 150) *that produces a bus-type transaction from a point-to-point type transaction* (see Figs. 1 and 3A, and col. 4 lines 10-25, where accesses between 140 and the caches 130, 160 and other chip 110 logic may be considered point-to-point, producing bus transactions therefrom on 152, 154 and 158), *detection logic connectable thereto to detect cache coherency protocol mode associated with an originating system that provides the point-to-point transaction* (reads the mode bit to determine coherency mechanism, see col. 9 lines 20-32), and *coding logic connectable to the above, to control how a cache coherence transaction from the origination system is processed by the interface, based on the mode detected* (MAA logic of 140 initiates various bus transactions dependent upon the operative coherency mechanism, see col. 9 lines 40-66, and col. 10 Table 4).

13. As to claim 10, Quach discloses the system substantially as described above with regard to claim 1; point-to-point and bus-type transaction logic as recited are indigenous to the functions as described above.

14. As to claims 2 and 11, Quach discloses state machine to track transaction types to the extent claimed (since the various coherency transactions are responded to).

15. As to claim 19, Quach discloses the interfaces substantially as described above with regard to claim 1; that is, each function performed as described with regard thereto requires the interfaces as recited.

Allowable Subject Matter

16. Claims 3-5, 7-9, 12-14, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Patent No:

6,799,252 Modular memory with crossbar connections.

6,678,799 Aggregation of cache updates in multiprocessor shared memory.

2003/0110338 Conversion between point-to-point and bus signals.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary J. Portka whose telephone number is (571) 272-4211. The examiner can normally be reached on M-F 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on (571) 272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2188

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gary J Portka
Primary Examiner
Art Unit 2188

June 19, 2006

A handwritten signature in black ink, appearing to read "Gary J Portka", written in a cursive style.

**GARY PORTKA
PRIMARY EXAMINER**